

# **PROJECT**

Leveraging Public Sector Procurement Policies to Expand Opportunities for Women in Engineering

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# Using Procurement Policy to Advance Equity, Diversity, and Inclusion

# **Literature Review and Environmental Scan**

# **Executive Summary**

The purpose of this project, funded by Women and Gender Equality Canada (WAGE), is to explore the potential to use public procurement policy to advance diversity goals in the procurement of engineering services and, in particular, to support increased career opportunities for women in consulting engineering and in the engineering profession.

The purpose of this literature review is to summarize the current state of thinking about the use of procurement policy to support equity, diversity, and inclusion goals. The particular focus of the review is on the potential for using public procurement of engineering services to support increased opportunities for women in engineering careers.

The 2016 Canada Census indicated that nationally, only 14.3% of engineers were women. Many women who qualify as engineers leave engineering as they pursue other careers. The representation of women in engineering is significantly lower than in other professions – a problem that the profession understands and is struggling to address.

Historically, public procurement has focused on securing the best value for public expenditures through a transparent process of competitive tendering in which vendors are evaluated on price, qualifications, experience, and their capacity to meet the specified need. However, every public purchase necessarily also has an economic, environmental, and social impact, whether intentionally or not. The term "social procurement" encompasses this broader understanding of public procurement. Three types or approaches to social procurement predominate. These are Supplier Diversity Programmes (SDPs), Community Benefits Agreements or Programmes CBA/Ps) and Sustainable Procurement Policies (SPPs).

- SDPs are narrowly constructed to support businesses that are owned and controlled by members of an equity-seeking group. The tight link between SDPs and ownership tests makes these programmes largely unsuited to supporting equity, diversity, and inclusion goals in the procurement of public services. However, an important aspect of SDPs is that many rely on third party certifications to identify eligible vendors. This underlines the potential importance to public sector bodies of independent certifications when applying non-price criteria to the selection of vendors.
- CBA/Ps are associated with construction projects and focus primarily on providing training and apprenticeship opportunities in the skilled trades to persons from groups that have historically been underrepresented in the construction labour force.

 SPPs often incorporate equity, diversity, and inclusion goals and include strategies to apply these goals to procuring professional services.

There is therefore a gap in current procurement policy and practice which needs to be addressed.

The process of procuring professional services is complex. Depending on the circumstance, there may be different approaches taken to inviting vendors to bid, selecting a vendor, and contracting with a vendor. Any strategy to incorporate equity, diversity, and inclusion criteria into the selection of engineering service providers (or, more broadly, professional service providers) needs to take the complexity of the procurement process into account.

Qualifications-Based Selection (QBS) has been statutorily mandated in the United States since 1972. QBS is supported in Canada by major professional and industry bodies and by the Federation of Canadian Municipalities (FCM). However, the use of QBS by public sector bodies in Canada has been limited notwithstanding the documented advantages of QBS to owners and clients.

There are notable examples of engineering firms that are leaders in adopting equity, diversity, and inclusion principles. Procurement policy could be used to foster the wider adoption of these best practices across the consulting engineering sector.

QBS readily accommodates the application of equity, diversity, and inclusion criteria as part of the broadly defined "qualifications" of service providers. While there is not an automatic relationship between QBS and the application of equity, diversity, and inclusion criteria in selecting engineering service providers, the alignment of these criteria with QBS is compelling and strategically important.

The review suggests four areas where additional insight will be valuable:

- 1. A better understanding of what leading engineering firms are already doing in the area of equity, diversity, and inclusion.
- 2. Additional insight into the types of third-party certifications that public sector organizations value in their procurement processes.
- Insight from experienced procurement experts on how equity, diversity, and inclusion criteria can be incorporated into the different types of procurement processes that are used to hire professional services providers and engineering service providers, in particular.
- 4. Advice from QBS experts on how equity, diversity, and inclusion goals can be integrated into QBS.

# **Table of Contents**

Executive Summary	3
Introduction	6
Part I: Social Procurement	9
Supplier Diversity Programmes (SDPs)     Defining a Diverse Supplier.     Thresholds     Set-Asides for Small and Medium-Sized Enterprises (SMEs)      Community Benefits Agreements (CBAs)      Sustainable Procurement Polices (SPPs)  Gender-Responsive Public Procurement Policies  Summary	12 13 14 14
Part II: Approaches to Procuring Professional Services	17
Ownership and Structure in Professional Services Firms  Contracting for Engineering Services.  The Invitation Process.  Invitation by Tender.  Invitation by RFP.  Invitation by RFQ.  The Fee Contracting Process  Fixed-price Contracting  Fixed-rate Contracting  Standing Offer Contracting  Percentage of Budget Contracting  The Selection Process  Lowest Price Selection  Best Value Selection  Qualifications-Based selection (QBS)  Price-Based Procurement and QBS  Findings on QBS	
Part III: Example of Leading EDI Practices in Engineering Firms	25
WSP Global      SNC-Lavalin      Mott Macdonald	26
Part IV: Conclusions and Next Steps	29
References	31

# Using Procurement Policy to Advance Equity, Diversity, and Inclusion

# Literature Review and Environmental Scan

### Introduction

The purpose of this literature review is to summarize the current state of thinking about the use of procurement policy to support equity, diversity, and inclusion goals and to consider, in particular, the potential for using public procurement of engineering services to support increased opportunities for women in engineering careers.

Women comprise half of the labour force in Canada, but their representation in Canadian engineering continues to be low, ranging from 9.5% in mechanical engineering to 26.8% in chemical engineering. While progress has been made in some engineering disciplines, women are underrepresented in most fields of engineering. Retention is also a problem (Franzway *et al.*, 2009). Overall, in 2016, only 14.3% of engineers were women.<sup>1</sup>

Table 1: Female Representation in Engineering Occupations in Canada

NOC Code and Occupation	Female Share
0211 Engineering managers	14.3%
2131 Civil engineers	17.7%
2132 Mechanical engineers	9.5%
2133 Electrical and electronics engineers	10.7%
2134 Chemical engineers	26.8%
2141 Industrial and manufacturing engineers	20.4%
2142 Metallurgical and materials engineers	15.9%
2143 Mining engineers	13.1%
2144 Geological engineers	18.1%
2145 Petroleum engineers	16.8%
2146 Aerospace engineers	12.4%
2147 Computer engineers (except software engineers and	11.1%
2148 Other professional engineers, n.e.c.	19.9%
Tot	al 14.3%

Source: Canada Census, 2016

<sup>&</sup>lt;sup>1</sup> A distinction needs to be made between persons employed as engineers and persons who are licensed as professional engineers. Census data indicate that only 14.3% of persons statistically classified as working in engineering occupations are women. Administrative data from engineering regulatory bodies indicate that 20.6% of persons who are licensed professional engineers are women. The difference implies that a significant proportion of women who are licensed as professional engineers are not working in an engineering occupation, although they maintain their licensure status.

The underrepresentation of women in the engineering profession is more acute than in many other professions. Table 2 shows that the representation of women in other approximately comparable professions ranges from 23.5% of computer and information systems professionals to 56.0% of financial auditors and accountants.

Table 2: Female Representation in Various Professional Occupations in Canada

NOC Code and Occupation	Female Share
211, 213 and 214 Engineers and Engineering Managers	14.1%
211 Physical science professionals	31.3%
212 Life science professionals	44.8%
215 Architects, urban planners, and land surveyors	31.9%
216 Mathematicians, statisticians, and actuaries	45.4%
217 Computer and information systems professionals	23.5%
3111 Specialist physicians	39.1%
3112 General practitioners and family physicians	47.1%
3113 Dentists	38.9%
4011 University professors and lecturers	44.0%
4112 Lawyers and Quebec notaries	43.9%
1111 Financial auditors and accountants	56.0%
1112 Financial and investment analysts	44.9%
1113 Securities agents, investment dealers, and brokers	31.5%
1114 Other financial officers	45.6%

Source: Canada Census, 2016

On its face, there is a serious underrepresentation of women in engineering and that underrepresentation is markedly more acute than in many other professions. This persistent underrepresentation is recognized by Engineers Canada which has adopted a target of "30 by 30", meaning 30% of licensed professional engineers should be women by 2030 (Engineers Canada).

There is no simple answer to the problem of gender imbalance in the engineering profession. Progress will require the efforts of employers, universities, and professional associations. A key factor will be the policies and practices of engineering employers but, in particular, firms in the consulting engineering sector. Consulting engineering occupies an especially important place in the engineering profession. This sector is the largest employer of professional engineers, accounting for 38.1% of engineers and engineering managers in the 2016 Census. As this literature review will show, there are employers in the consulting engineering sector that have already developed policies and programs to increase their recruitment and retention of women. An important question, therefore, is how to encourage other consulting engineering firms to adopt similar policies and programs.

The public sector is a major user of consulting engineering services. Statistics Canada data (Table No. 21-10-0165-01) indicate that, in 2020, the public sector accounted for

approximately 20.7% of the revenues of the consulting engineering sector. This measure, however, includes only consulting services where a government or public agency was the *direct client*. When we include work undertaken by government-owned enterprises and construction and other projects that are financed by governments, the broadly defined public sector's share of consulting engineering revenues would be between 30% and 35%. Public sector procurement policy, therefore, potentially has a significant contribution to make in supporting equity, diversity, and inclusion goals in the consulting engineering sector.

This literature review is divided into four sections.

- Part I summarizes trends in "social procurement", i.e., using public sector procurement policy to advance equity, diversity, and inclusion goals.
- Part II summarizes the key themes in the literature on procuring professional services including a discussion of Qualifications-Based Selection (QBS).
- Part III describes examples of best practices in three international engineering firms that proactively support equity, diversity, and inclusion.
- Part IV summarizes the gaps in our knowledge and discusses the implications of this literature review for the next steps in exploring a strategy to use public procurement of engineering services to foster and support increased opportunities for women in engineering careers.

#### Part I: Social Procurement

Historically, public procurement has focused on securing the best value for public expenditures through a transparent process of competitive tendering in which vendors are evaluated on price, qualifications, experience, and their capacity to meet the specified need. However, <u>public procurement has always been about more than purchasing the goods and services needed to deliver public services.</u>

Buy Social Canada<sup>2</sup> notes that, "every purchase has an economic, environmental, and social impact, whether intended or not". The term "social procurement" seeks to encompass this broader understanding of public procurement. Buy Social Canada describes social procurement as "capturing [the economic, environmental, and social] impacts and seeking to make *intentional* positive contributions to both the local economy and the overall vibrancy of the community" (emphasis added) (Buy Social Canada, 2018). In a similar vein, the federal Office of the Procurement Ombudsman stated in a recent report that "social procurement… refers to using procurement as a means for achieving *strategic* social, economic, and workforce development objectives" [emphasis added] (Office of the Procurement Ombudsman, 2020).

Social procurement does not detract from the traditional value-for-money criteria: price, qualifications, experience, and capacity. Rather, social procurement seeks to leverage the purchase of goods and services to intentionally advance social and economic goals. These goals are varied. They include, among others, community economic development, support for small and medium enterprises, workforce development, environmental sustainability, and equity, diversity, and inclusion (McCrudden, 2007; Orser 2009; Orser et al., 2020).

This section describes three types of social procurement:

- 1. Supplier Diversity Programmes (SDPs),
- Community Benefits Agreements (CBAs) or Community Benefits Policies (CBPs), and
- 3. Sustainable Procurement Policies (SPPs).

# 1. Supplier Diversity Programmes (SDPs)

A Supplier Diversity Programme provides preferred or encouraged access to procurement contracts for businesses owned by persons from groups that have been historically underrepresented in the public sector supply chain. This includes, among others, women, Indigenous people, persons with disabilities, racialized persons, veterans, *etc*. The rationale for SDPs is that these groups often lack the social and business networks that facilitate access to procurement opportunities. A key feature of most SDPs is that they define a

<sup>&</sup>lt;sup>2</sup> Buy Social Canada is a social enterprise that brings together purpose driven purchasers and social value suppliers to build business relationships that generate social benefits for communities across the country.

<u>diverse supplier in terms of the identity of the business owners, i.e., the owners' gender,</u> race, ethnicity, *etc*.

In many cases, procurement authorities rely on independent certifying bodies to attest to the diverse character of the company. Suppliers that meet the criteria for being considered diverse receive some type of preference or encouragement. At one end of the spectrum, this preference may be training on how to find opportunities and prepare bids or proposals. At the other end of the spectrum, preference may involve additional evaluation points for being a diverse supplier. Some tendered opportunities may be restricted to diverse suppliers. In other cases, the procurement policy may require that at least one proponent is a diverse supplier or that diverse suppliers were invited to submit a proposal.

SDPs originated in the United States to rectify the low representation of Black-owned businesses and small businesses in public sector procurement. Over the last 50 years, supplier diversity requirements in US federal purchasing have expanded in scope (Larson 2012). A landmark was the requirement in sec. 921 of the 1986 Department of Defence Authorization (PL 99-661) to direct relevant federal agencies to annually expand participation by small businesses in procurement contracts, including small business concerns that were Black-owned or controlled. The legislation directed that each year targets should be set for the participation of small businesses and minority-owned businesses in procurements.

In Canada, there is no legislative or regulatory framework for SDPs at the federal or provincial level. However, some municipalities and companies have adopted SDPs. There is evidence that this trend is increasing. A 2020 survey or organizations engaged in procurement<sup>3</sup> (Larson *et al.* 2021) found that the majority of respondents were either developing an SDP or had already partially or fully implement an SDP. Significantly, 90% of the respondents were private sector employers. While the survey sample was small, the results do suggest that the private sector has been more innovative in designing SDPs. Larson et al. comment on the slow development of SDPs in the public sector, noting that "Canada is still behind in its implementation of SDPs at all levels of government".

The results of the 2020 survey confirm the findings of earlier surveys with larger samples, notably, a 2012 survey<sup>4</sup> of employers in the Greater Toronto Area (Larson 2012) and a national survey<sup>5</sup> administered in 2015 by the Canadian Centre for Diversity and Inclusion. Among the key findings of these surveys were:

- SDPs were more prevalent in the private sector than in either the not-for-profit sector or the public sector.
- SDPs focused on a variety of inclusion goals including persons with disabilities, Indigenous peoples, racialized groups/visible minorities, LGBTQ2S+ people, veterans, and women.

 $^{4}$  n=165

 $<sup>^{3}</sup>$  n=50

<sup>&</sup>lt;sup>5</sup> n=242

- <u>Larger organizations were more likely to have SDPs than smaller</u> and mid-sized organizations.
- Concern about diverse suppliers' capacity to perform was ranked exceedingly low as a barrier to implementing an SDP. (In the 2015 survey, only 4% of respondents cited this concern).
- Half (52.0%) of survey respondents in the 2015 survey cited "lack of clarity on which suppliers are diverse" as an important barrier to implementing an SDP.

The public/private sector divide was also noted in a survey undertaken by the Conference Board of Canada. A 2017 report by the Conference Board found that 51% of private sector enterprises were implementing supplier diversity programmes while only 21% of public sector enterprises were doing so.

In 2021, the Ontario Chamber of Commerce endorsed a private member's bill which sought to increase diversity in the Ontario government's supply chain.<sup>6</sup>

The lower uptake of SDPs in the public and not-for-profit sectors is a puzzle. Given the oft-expressed commitments of governments to equity, diversity, and inclusion, it might have been expected that the public and not-for-profit sectors would lead in the adoption of SDPs. The survey evidence, however, suggests that this is not the case. This is clearly an area that needs more research. It may be that difficulties in designing an SDP and in finding diverse suppliers are more significant barriers in the public and not-for-profit sectors. Trade agreements may also be a more important factor in the public sector. As well, public sector purchasers are under more stringent legal obligations to operate procurement policies that ensure a level playing field for vendors. Reconciling these constraints with SDPs may pose a greater challenge in the public sector than in the private sector.

In a comparison of SDPs in the United States and the United Kingdom, Worthington (n.d) notes that private sector managers owe a strong fiduciary obligation to the owners of the business and therefore must frame the argument for an SPD in terms of a business case that ultimately contributes to shareholder value. For this reason, Orser (2009), the Canadian Centre for Diversity and Inclusion (CCDI), and the Women's Business Enterprises Canada Council put considerable emphasis on the business case for supply chain diversity. The essence of the business case is that SDPs do not compromise quality, but do increase the potential vendor pool, draw in potentially innovative vendors, and also advance broadly shared commitments to greater equity and diversity thereby enhancing the reputation of an organization in the community.

The literature review found no evidence of a trend to adopt "set-asides" for small businesses or minority-owned businesses in Canada, although these practices do apply to procurement by some public sector bodies in the Untied States.

<sup>&</sup>lt;sup>6</sup> Ontario Chamber of Commerce, Media Release, April 13, 2021.

The Women Entrepreneurship Knowledge Hub (WEKH) believes that Canadian practice lags the United States in supporting women-owned businesses through public procurement policies (WEKH, 2021). The WEKH estimates that less than five percent of corporate and government contracts are awarded to women-owned businesses. This would be a striking finding if the contract universe was limited to procurements under \$100,000 (or even \$250,000). However, when the contract universe is all corporate and government contracts, it is less clear whether the statistic has any useful meaning.

# Defining a Diverse Supplier

As noted earlier, the ownership of a business is always a key metric in determining whether a business can be considered diverse. To address the need for accrediting a business as diverse, various certifying bodies have come into existence. Companies that wish to do so can obtain certification from organizations that certify businesses as being diverse suppliers (Orser, 2009). Examples of such organizations are:

- Canadian Aboriginal and Minority Supplier Council (CAMSC)
- Inclusive Workplace and Supply Council of Canada (IWSCC) for veterans and persons with disabilities
- Canadian Council for Aboriginal Business (CCAB)
- Canadian Gay and Lesbian Chamber of Commerce (CGLCC)
- National Gay and Lesbian Chamber of Commerce (NGLCC)
- National Minority Supplier Development Council (NMSDC)
- Women's Business Enterprises Canada Council (WBE)
- WeConnect International (WCI)

WBE and WCI focus on certifying enterprises owned by women. The United Nations' guide to gender-responsive procurement defines Women-Owned Businesses as enterprises in which: (i) there is 51% ownership by one or more women; (ii) there is unconditional control by one or more women over long-term decision-making and the day-to-day management and administration of the business operations; and (iii) there is independence from non-womenowned businesses. This rigorous definition would eliminate all but a handful of professional services firms.

Companies and organizations can obtain lists of certified organizations from these certifying bodies which they can then utilize to source goods or services. Alternatively, they can require certification in a tender request or assign points to certified proponents. A criticism of certifying bodies is that they are financially supported by fees levied for certifying applicants. For micro-enterprises, these fees may be a barrier.

A more significant criticism of SDPs that rely on certifying bodies is that, in some fields and for some types of procurement, ownership misses the point on how the industry operates. This is especially the case with professional services firms, including consulting engineering firms. Some professional services firms are investor owned. WSP Global, for example, is a Canadian-based firm which is one of the world's largest engineering consultancies with

approximately 47,000 employees. The firm is listed on the Toronto Stock Exchange. Other firms are owned by their partners, some of whom may be women. Some firms have employee stock purchase programs for their employees. Relying on ownership as the principal or sole criterion for determining diversity effectively limits the scope of an SDP to small businesses and small-scale procurements. It is not surprising, therefore, that SDPs are associated with low spending thresholds. While there is value in fostering diversity at the small purchase end of the supply chain, that focus necessarily ensures that SDPs will have a limited social and economic impact.

#### Thresholds

It is a common practice for social procurement policies to establish a value threshold above which the policy either applies in a mitigated form or not at all. These thresholds tend to be low. For example, the City of Toronto's Social Procurement Programme applies to purchases within a range of \$3,000 to \$500,000.

The low thresholds may be prompted by several factors. In the first place, it is more difficult to apply ownership tests to the types of companies that bid on high value procurements. Second, on high value procurements, there is fairness and transparency jurisprudence that applies to public procurement and, consequently. liabilities that may arise when practice diverges from this jurisprudence. Third, the Canadian Free Trade Agreement prohibits preference policies for procurements above \$250,000, although there are exceptions for legitimate social objectives. In the case of the Ontario-Quebec Trade and Cooperation Agreement, the threshold is \$100,000.

## Set-Asides for Small and Medium-Sized Enterprises (SMEs)

The most common form of SDP to support SMEs is a small business set-aside which reserves procurements within a certain value range to SMEs.

To some degree, supplier diversity goals may intersect with the promotion of SMEs because diverse ownership is more likely in the SME sector. The Women Entrepreneurship Knowledge Hub cites the following data:

- 15.6% of SMEs are owned by women
- 12% by racialized minorities
- 37.8% of self-employed Canadians are women
- 50% of new businesses are now started by women
- 92.7% of women-owned businesses have fewer than 20 employees
- 18.9% of enterprises classed as social enterprises are owned by women<sup>7</sup>

<sup>7</sup>Social enterprises are revenue-generating businesses that may be privately owned or owned by a not-for-profit organization. A social enterprise has two goals: (i) to achieve social, cultural, community economic and/or environmental outcomes, and (ii) to earn sufficient revenue to be self-supporting. There is no definition of social enterprise in the Income Tax Act. In British Columbia there are two legal structures which are expressly designed as 'containers' for social enterprises. These are the Community Contribution Company, which was introduced in

SDPs that support greater participation of SMEs in public procurement may therefore also have the effect of supporting greater diversity in procurement.

# 2. Community Benefits Agreements (CBAs)

Community Benefits Agreements (CBAs) are formal agreements between community coalitions and private or public developers to use the development project to advance diversity and inclusion goals, usually through hiring, training, and apprenticeship programmes. Community Benefits Policies (CBPs) are policies or regulations adopted by public sector bodies that make diversity and inclusion initiatives a mandatory component of a vendor's contract (Prism, 2020).

Community benefits agreements emerged in the United States. Initially, CBAs applied to private development projects. The CBA typically required the community organization to support the development project in exchange for the negotiated community benefits. Subsequently, many municipalities and some states required CBAs to be negotiated on public projects.

In Canada, there is no history of CBAs being negotiated on private development projects. However, it has become increasingly common for community benefits to be incorporated into publicly funded construction projects. A recent study by the Ontario Construction Secretariat found that community benefits commitments applied to almost \$44 billion of construction projects in Ontario.

The occupational focus of both CBAs and CBPs has been on expanding access to construction and skilled trades jobs for persons from groups that have been historically underrepresented in the construction industry, chiefly women and racialized persons. However, organizations promoting community benefits, such as the Toronto Community Benefits Network (TCBN), *are* expanding the scope of CBAs to include increasing access to professional, administrative, and technical jobs. This would potentially include engineers, especially those who were trained outside of Canada.

# 3. Sustainable Procurement Polices (SPPs)

Sustainable procurement initially was an approach to procurement which emphasized the need to mitigate damage to the environment by considering the environmental impact of the goods or services procured. Later iterations of the concept incorporated societal impacts. A report by the U.K-based Chatham House proposes the following definition of sustainable procurement:

2013, and the Benefit Company, which made its debut in 2020. B.C. Centre for Social Enterprise. https://www.centreforsocialenterprise.com/what-is-social-enterprise

"Sustainable procurement is a process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a life-cycle basis while addressing equity principles for sustainable development, therefore benefiting societies and the environment across time and geographies".

The Quebec based organization, ECPAR<sup>8</sup> uses a similar definition:

"Sustainable procurement is the integration of sustainable development and social responsibility into the acquisition processes of private and public organizations. It consists of integrating environmental, social and economic criteria into the procurement processes of goods and services, as a means of reducing the impact on the environment, increasing social benefits and enhancing the economic sustainability of organizations throughout the product life cycle".

The City of Edmonton states that:

"Every purchase has intended and unintended economic, environmental and social impact. Sustainable procurement is about consciously considering those impacts and seeking to make intentional positive community contributions".

These definitions put societal impacts, including equity impacts, on par with environmental impacts.

Recent sustainable policy frameworks adopted by municipal governments often integrate environmental, societal, and ethical considerations into their procurement process. The City of Brampton, for example, adopted a Sustainable Procurement Framework in 2020 which gives equal weight to environmental, social, economic, and ethical factors. A common feature of SPPs is a Vendor Code of Conduct which often includes requirements for diversity policies.

In the private sector, environmental, social, and governance (ESG) policies have taken on increased importance. These policies often commit companies to equity and diversity policies.

# **Gender-Responsive Public Procurement Policies**

There are a number of examples of policies that support women-owned enterprises, and which encompass professional services.

 In 2012, Australia amended its Equal Opportunity for Women in the Workplace Act to require designated employers to file annual reports

<sup>&</sup>lt;sup>8</sup> ECPAR – Éspace Québecois de concertation sur les pratiques d'approvisionnement responsible. ECPAR brings together Quebec's major public sector purchasers.

- containing information relating to various gender equality indicators (for example, equal remuneration between women and men).
- In 1986, the Canadian government instituted a Federal Contractors
  Programme (FCP). The FCP requires organizations that do business
  with the government to implement employment equity in their workplace.
  Firms are obliged to implement measures to make their workforce
  representative of Canada's labour force with respect to the four
  designated groups under the Employment Equity Act women,
  Indigenous peoples, persons with disabilities, and visible
  minorities/racialized persons.
- In 2008, the federal government funded the launch of WEConnect International in Canada. WeConnect is a global network that connects women-owned businesses to potential clients in both the public and private sectors.

Orser found that women-owned businesses are significantly less successful in securing government procurement contracts that businesses owned by men. Significantly, however, Orser also found that this underrepresentation of women-owned businesses did not apply in the procurement of "professional, scientific, and technical services" (Orser 2020).

# **Summary**

Based on the foregoing, a number of conclusions can be suggested:

- 1. <u>The private sector has led the public sector</u> in designing and implementing Supplier Diversity Programmes.
- 2. <u>Supplier Diversity Programmes generally rely on ownership to classify a business as diverse. This effectively limits the scope of SDPs to low-value procurements</u> since the ownership test is generally not workable on large-value procurements.
- 3. Community Benefits Agreements and Community Benefits Policies are generally focused on expanding opportunities for underrepresented groups in the skilled trades, not in the professions.
- 4. At the federal level, the Federal Contractors Programme requires vendors to implement employment equity. This potentially has implications for suppliers of professional services.
- 5. There is a dearth of literature on employment equity in professional services and on the use of procurement policy to foster such policies in the professional services sector.

# Part II: Approaches to Procuring Professional Services

Professional services firms employ persons with advanced qualifications to carry out assignments that require a high level of expertise (von Nordenfycht, 2010). Professional services include, among others: engineering, architecture, actuarial, legal, accounting, financial analysis and advice, and general management consulting. Information technology consulting may be provided as a professional service in its own right or as a service combined with a technology purchase.

The government of Canada has identified the most frequently purchased professional services, as outlined in Table 3.

Table 3: Most frequently purchased professional services

Information III Durfa acional Comings
Informatics/IT Professional Services
Human Resources
Organizational Management
Project Management
Organization and Classification
Change Management
Business Consulting
Technical Writing
Technical, Engineering & Maintenance Services
General Engineering Services
Training, Development & Delivery Services (excludes commercial off-the-shelf
training)
Translation
Construction, Architectural, and Engineering

Source: Government of Canada

## **Ownership and Structure in Professional Services Firms**

Professional services firms can be organized variously as:

- Sole proprietorships
- Partnerships
- Employee-owned enterprises
- Privately held corporations
- Publicly traded corporations

Figure 1 shows the distribution of professional services employment based on enterprise size.

Share of Employment Professional, Scientific and Technical Services (NAICS 54) 30.0% 26.5% 25.0% 18.2% 20.0% 15.9% 13.2% 15.0% 12.1% 9.1% 10.0% 5.0% 5.0% 0.0% 5 to 19 20 to 49 50 to 99 100 to 299 300 to 499 500 and employees employees employees employees employees more employees

Figure 1:Distribution of Employment Professional, Scientific and Technical Services Industry (NAICS 54) in 2020

Source: Statistics Canada, Table No. 14-10-0215-01

The federal government and its agencies define a small business as one having fewer than 100 employees, and medium-sized business as one having fewer than 500 employees. On this basis, *just under three-quarters of professional services firms are small to medium-sized enterprises (SMEs)*. While there are many sole proprietorships providing professional services, it is uncommon for a consultancy with more than 20 staff to be wholly owned by a sole proprietor. The more usual business structure is to extend ownership and partner status to senior members of the firm. Indeed, this is one of the distinguishing features of professional services businesses (Nanda and Prusiner, 2010; Ang *et al.*, 2015).

The ownership structure of professional services firms complicates the use of supplier diversity programs when procuring professional services. A professional services firm that wants to maintain its status as a certified minority-owned or women-owned business would need to have a policy of *not* advancing to partnership or ownership level, persons who would dilute the firm's minority-owned or women-owned status. This is impractical.

Some professional services are provided on a one-time only basis. However, a common pattern is that firms acquire expertise in a client's needs and therefore develop a long-term relationship with that client. They may be sole sourced for some work or be an advantaged bidder when particular types of work are tendered. Within professional service firms, it is common for firms to be organized around business units and practices in which a practice lead (often a partner or a principal) enjoys a high degree of autonomy in pursuing and carrying out assignments. All of these factors complicate applying ownership or control criteria and therefore make it difficult to apply conventional Supplier Diversity Programmes to the procurement of professional services.

<sup>&</sup>lt;sup>9</sup> Government of Canada, Key Small Business Statistics

# **Contracting for Engineering Services**

Engineering firms provide a range of technical services. Table 4 summarizes the share of consulting revenues attributed to various services. Approximately 60% of these services would apply, at least in part, to public sector entities and government-owned enterprises.

Table 4: Percent of Operating Revenues Earned by Engineering Services Firms based on Type of Service

Type of Service	Percent of Operating Revenues
Residential building engineering projects	5.5%
Commercial, public, and institutional building engineering projects	17.0%
Mining and metallurgical	5.9%
Petroleum and petrochemical	19.0%
Industrial machinery	2.2%
Other industrial and manufacturing engineering projects	5.3%
Transportation engineering projects	11.5%
Municipal utility engineering projects	3.7%
Power generation, transmission, and distribution engineering projects	4.0%
Telecommunications and broadcasting engineering projects	1.5%
Hazardous and industrial waste engineering projects	0.3%
Engineering advisory services	1.8%
Other engineering projects or services	10.1%
Project management services	2.0%
Construction services	3.0%
Environmental consulting services	3.5%
Other sales of goods and services	3.9%

Source: Statistics Canada, Table No. 21-10-0212-01

Across the public sector and in most of the private sector, procurement policies govern the purchase of goods and services. In municipalities, these policies are usually set out as a Purchasing By-Law. To understand the challenges in using public procurement to advance equity goals in professional services, it is important to understand the complexity of the procurement process.

It is useful to distinguish:

- The invitation process
- The fee contracting process
- The selection process

#### **The Invitation Process**

There are three types of invitations to provide professional services: tenders, requests for proposals (RFPs), and requests for qualifications (RFQs). While all three procedures can be used to retain professional services, RFPs and RFQs are the more common.

## Invitation by Tender

In a tender-based invitation to bid, the procuring entity's needs are set out in precise detail known as the specifications. A bid is essentially a contractually binding offer to meet these specifications in the manner prescribed and at a price proposed by the vendor. The tender specifications set out the minimum qualifications and experience required. In a tender, suppliers of services are only required to meet the minimum qualifications and experience. Among the suppliers who meet these minimum qualifications, the award is based on price. A public entity that awards a tender to a non-qualified vendor or to a vendor that proposed a higher price potentially creates a legal liability if the deviation from minimum qualifications and best price cannot be justified (Konopelny et al, 2021).

## Invitation by RFP

In RFP-based invitations to bid, the purchaser *sets out a statement of work* to be done and invites prospective vendors to propose how they would go about undertaking this work and who will comprise their assignment team. Vendors may sometimes be invited to propose additional value-added services or alternatives to the approach envisioned in the statement of work. Vendor selection is based on a combination of qualifications, experience, understanding of the statement of work, the calibre of the proposed work plan, and the proposed price. The weighting of these factors varies based on the nature of the work to be undertaken.

In both tender-based and RFP-based procurement, there are defined deliverables. The tender or RFP may also establish timelines, work location, payment terms, and requirements to transfer knowledge from the vendor to the client.

## Invitation by RFQ

In RFQ-based invitations, proponents are asked only to describe their qualifications and to indicate the rates that they apply for each person listed in their proposal. RFQs are commonly used to develop a list of pre-qualified vendors who will subsequently be invited to make a proposal to undertake a specific assignment.

#### The Fee Contracting Process

There are four types of fee contracts: <u>fixed price</u>, <u>fixed rate</u>, <u>standing offer</u> and <u>percentage of budget</u>.

#### Fixed-price Contracting

The contract for the assignment stipulates a price which is usually the price proposed by the vendor in its bid (for a tender) or proposal (for an RFP). The contract may include rates that will apply to work that is undertaken beyond the original specifications or statement of work.

Fixed-price contracting is commonly used for most types of management consulting services.

# Fixed-rate Contracting

Fixed-rate contracting is used when it is not practical to estimate the amount of professional time that will be required. This is commonly the case when legal services are retained. Selection is based on qualifications, experience, and hourly rates.

# Standing Offer Contracting

In standing offer contracting, the public sector entity establishes a roster of service providers based on their qualifications and rate schedule. The service providers agree to provide their professional services per the rate schedule. This is known as the "standing offer". Standing offers are time limited. As requirements arise, the public sector entity selects from the roster of approved service providers. Standing offer contracting is generally used when the public sector entity knows that it will require professional services but has not determined the specific tasks and assignments. Standing offer contracting expedites the selection of professional service providers for particular assignments, especially assignments that are small to mid-sized.

# Percentage of Budget Contracting

For design services, the professional fee is often expressed as a percentage of the project budget. This procedure is particularly common when contracting for architectural services. Engineering services, it should be noted, may be included in this fee as it is common practice for the structural, electrical, and mechanical engineers to be sub-contractors to the architects. In selecting architects, the purchasing entity invites initial proposals which are prepared at the expense of the proponents. A short-list is then developed. The short-listed firms are paid an allowance to further develop their proposals. The short-listed firms compete based on their fee (which they express as a percentage of the project budget), their design proposal, and their qualifications and experience.

## **The Selection Process**

There are three types of selection processes: <u>lowest price</u>, <u>best value</u>, and <u>qualifications</u> <u>based</u>.

#### Lowest Price Selection

In lowest price selection, a contract is awarded to the proponent that meets the *minimum* qualifications stipulated and submits the lowest price proposal. Lowest price selection is commonly used in awarding construction contracts but is not typically used in awarding professional service contracts.

#### Best Value Selection

Best value selection is based on an evaluation process which separates technical merits (including qualifications) from price. Proponents may be asked to prepare separate technical and fee proposals. In a best value selection process, the RFP may allocate up to (say) 80

points for qualifications. Experience, and the calibre of the proposal. The remaining 20 points (in this example) are allocated based on price. The proponent with the lowest price is accorded 20 points. Other proponents receive points determined by the ratio of the lowest price to their price proposal. The final award is based on total points. Therefore, the selected proponent may or may not be the lowest price vendor.

#### Qualifications-Based selection (QBS)

QBS is an alternative procurement model that is favoured by many providers of professional services. QBS has been utilized by many public sector bodies. In QBS selection, the public sector entity sets out a general description of the scope of services in an RFP. Proposals describe the proponents' qualifications and experience. In some cases, a rate schedule is included with the proposal, but *not* a price for the assignment. Following meetings with the short-listed proponents, a provisional selection is made based on qualifications and experience. The selected service provider and the public sector entity then *jointly* develop the final and detailed statement of work. Based on the agreed statement of work, the selected provider then submits a fee proposal which is subject to negotiation. If a total fee cannot be agreed upon, the public sector entity commences negotiations with the next favoured proponent. Table 5 describes the application of QBS procurement based on a survey of public sector entities that have utilized this approach.

STEPS **ACTIVITIES** Step 1: Select the best qualified firm Establish evaluation criteria Solicit statements of qualifications from interested Develop a shortlist of 3-5 firms. Investigate references, jobs, and office. Invite for interview Interview and rank the firms Step 2: Jointly define scope and Invite the highest ranked firm to assist in defining the contract terms scope of the work Establish contract terms If the agency and firm do not agree upon the terms, go to the next firm on the shortlist Step 3: If yes, retain the firm on the Ask for fee proposal basis of an acceptable fee proposal Agreement? If not, go to the next firm on the shortlist; if yes, retain the firm and enter into a written contract.

Table 5: QBS Procurement Process

(Source: QBSColorado as cited by Qiao & Cummings, 2003)

## **Price-Based Procurement and QBS**

It is axiomatic that price matters. The practical issues are twofold. First, what weight should be accorded to price? And second, at what point in the evaluation and selection process should price be considered?

In tender-based invitations, price is wholly determinative, subject to a proponent meeting the minimum qualifications and experience set out in the invitation to tender. In best-value selection, price is a weighted consideration, but has less weight that the qualifications and experience of the proponents and the calibre of their proposals. Sporrong (2011) found that, notwithstanding a multi-factor evaluation process, price was the most important factor if it was considered concurrently with other factors. Sporrong noted that price had this effective role in selection, even though a large majority of respondents to his survey reported that qualifications and experience are the most important factors in a project's success. As noted earlier, some public sector bodies use a "two envelopes" system to separate consideration of price from consideration of qualifications, experience, and the calibre of the proposal. To some degree, this procedure protects the integrity of evaluation based on non-price factors. However, the two-envelope system can still result in a less qualified proponent being selected. The two-envelope system also precludes the possibility of selecting the most qualified proponent and then negotiating fees.

Sporrong also found that, in construction, low bid selection does not guarantee the lowest project cost once change orders and claims are taken into account. Nor does low bid selection assure the lowest life cycle costs.

Hoxley (cited by Sporrong, 2011) found that the perception of quality was higher when a preselection process was used to establish a short-list of qualified service providers. Lo and Yan (2009) found that when price is included as a selection criterion, aggressively low bidders enjoy a significant advantage over more qualified vendors. They also found that the QBS system encouraged contractors to emphasise project quality. Lo and Yan cite studies showing that when providers bid low to secure an assignment, they adopt compensating strategies. These include cutting corners, assigning a greater proportion of the work to less qualified staff, or (in the case of construction) bringing claims against the project owner. On balance, Lo and Yan conclude that procurement models that incorporate price have an inevitable bias to lower quality. They find that QBS avoids this adverse bias, if the evaluation of qualifications also includes consideration of past performance.

Qiao & Cummings (2003) reviewed scholarly research on the use of QBS in the United States. They report that QBS is becoming more prominent in the selection of professional services providers. Their survey of members of the National Institute of Governmental Purchasing (NIGP) and the American Public Works Association (APWA) found that "QBS and other non-traditional methods have gained wide acceptance and use in public agencies, especially for purchase of professional services and information technology" (p. 215).

In the United States, the *Brooks Act* requires federal procurement of architectural and engineering services to be based on QBS. Chinowski and Kingsley (2009) report that most U.S. states also follow this approach. In Canada, the Federation of Canadian Municipalities (FCM) recommends QBS for selecting design consultants, especially on complex projects. (FCM 2006).

QBS appears to be less frequently used in Canada than in the United States (Shelton, 2018). This may change, as the federal government has announced that it will implement

QBS on a pilot basis. However, currently the predominant approaches are low-bid tender-based procurement and best-value RFP-based procurement.

# Findings on QBS

Studies of QBS (chiefly based on U.S. experience) find that on design-build projects, QBS is associated with:

- More effective cost control
- Moderately faster delivery
- Costs that are comparable to low build and superior to best-value selection
- More innovation
- Less vulnerability to change order risk and related costs
- High satisfaction levels on the part of owners

Of particular importance for the focus of this report, Shelton (2018) also finds that QBS is well suited to accommodating consideration of social criteria, which would include gender inclusiveness.

# Part III: Examples of Leading EDI Practices in Engineering Firms

This section summarizes programmes at three large engineering firms to promote diversity and inclusion and to increase opportunities for women. Other firms have instituted comparable initiatives. These firms were selected because of the availability of information on their programmes.

## 1. WSP Global

WSP Global is a Canadian-based engineering firm. Internationally, the firm has over 55,000 employees. The company has a Director of Global Inclusion and Diversity. The company has adopted a commitment to improving gender balance across its global operations. This included achieving 30% women in management roles by 2021. The company supports its gender balance commitment by delivering training to its employees and practice leaders. The company's long-term plan includes a commitment to "broad recruitment and development programs that address underrepresented groups in the industry".

WSP Global has reviewed its employee compensation to identify and eliminate genderbased pay gaps. The company also tracks employee progress by gender and reports that it has reduced or eliminated gender-based gaps in many regions,

The Canadian branch is led by a female CEO. Forty percent of the leadership team are women.

In April 2021 the company published its Global Inclusion and Diversity Report which sets out the principles to which the company subscribes and the responsibilities of its leaders and employees. The company has also established a Global Diversity and Inclusion Network to share information across the company's various regional divisions.

WSP Global received the Employer of Choice for Gender Equality citation from the Workplace Gender Equality Agency of the Australian government. The criteria for the *Employer of Choice for Gender Equality* citation cover seven focus areas which can serve as a guide for any organization planning to improve gender diversity and creating a welcoming workplace that can retain women. These focus areas are:

- Leadership, strategy, and accountability the organization focuses on gender equality as a strategic priority with leadership commitment to achieving gender equality. Official strategic plans and an EDI plan should reflect this commitment.
- Developing a gender-balanced workforce organizations need a robust programme targeted to improving gender equity and representation in the workforce through outreach and engagement, recruitment and retention, talent identification, internal learning and development, and leadership programmes to support women's progress through the leadership pipeline and provide career opportunities across all levels of the workforce for women.

- Gender pay equity policies and strategies in place to address gender pay equity and the steps taken to improve identified gender pay gaps.
- Support for caring initiatives and programmes to support the workforce (including partners in partnership structures) with caring responsibilities, including but not restricted to parenting. It covers access to parental leave for women and men, return to work from parental leave and measures to support those with elder or disability care responsibilities. These supports acknowledge that women have borne the burden of caregiving which impacts their ability to progress in the organization and affects their lifetime pay and pension benefits.
- Mainstreaming flexible working support of flexible working arrangements (flexitime; hybrid work; remote) using a strategic approach and visible leadership commitment as well as skills and support for managers and the workforce.
- Preventing gender-based harassment and discrimination, sexual harassment, and bullying building a workplace culture that has zero tolerance.
- Driving change beyond the workplace company leaders do external advocacy work. Policies or plans are in place to ensure procurement, supply chain, and employment practices actively support gender equality objectives.

## 2. SNC-Lavalin

SNC-Lavalin is a Canadian-based international engineering firm with approximately 50,000 employees worldwide. The firm has an Equal Opportunities Statement on their recruitment page which speaks to encouraging equality, diversity, and inclusion. The firm states that it believes "diverse groups make better decisions – which leads to better business." The company is a signatory to the UN Global Compact on sustainable development.

The company's Sustainable Business Strategy (2018) committed SNC-Lavalin to increase diversity and equity in both its own operations and to work with clients to achieve those goals. SNC-Lavalin has established both quantitative and qualitative targets.

## Quantitative targets:

- Commitment from the Board to maintain at least 30% representation by women
- Proportion of women representation in Senior Leaders 25% by 2025
- Proportion of women representation in Managers & Senior Professionals
   25% by 2025
- Proportion of women representation in all staff 33% by 2025

# Qualitative targets:

- Annual improvement in employee engagement
- Provide support to local or national diversity groups

The company has joined the 30% Club Canada which encourages companies to appoint more women to board level and management level positions. SNC-Lavalin maintains a Diversity & Inclusion page on its web site which is regularly updated with news about company initiatives.

The North American division of SNC-Lavalin has undertaken several initiatives. These include:

- Creation of diversity awareness 'months' that ensure recognition and celebration of all diversity groups.
- Introducing Employee Listening Sessions to allow employees to engage in deeper conversations about inclusion.
- Ongoing review of 'unwritten rules' that govern employee behaviour and contribute to a culture of inclusion.
- Decade-old minority scholarship program (awarding scholarships to Junior and Senior level college students pursuing STEM degrees.)
- Well-established mentorship program for minorities.
- Increased promotion of the Women in Leadership affinity group.
- Posting monthly articles focused on diversity and published on the internal portal.

#### 3. Mott Macdonald

Mott Macdonald is a UK-based engineering firm that also operates in Canada. The firm's initiatives include:

- A Global EDI policy that applies to all the locations of the company.
- Embedding EDI into the business including recruitment, corporate social responsibility, procurement and supplier diversity, and work with clients.
- A 5-year EDI strategy.
- A full-time EDI team.
- Roundtables on race equality.

- One hundred colleagues involved in reverse-mentoring schemes in the UK and Middle East, matching senior managers with minority and underrepresented colleagues for two-way mentoring programme.
- Accountability through data including progress metrics and public reports.
- A *Diversity Dispatc*h publication.
- Hiring managers are expected to achieve a minimum of 25% diverse candidates on a shortlist in terms of gender or ethnicity. If this is not achieved, hiring managers must explain the steps they have taken to attract diverse candidates and are held accountable by the talent acquisition team.

# **Part IV: Conclusions and Next Steps**

This review has identified several trends that are relevant to using public procurement to support increased opportunities for women in engineering careers. The review has also identified important gaps which will need to be addressed.

Key findings include the following:

- The private sector leads the public sector in adopting equity, diversity, and inclusion goals. Within the public sector, municipalities are leaders, often incorporating equity, diversity, and inclusion goals under the rubric of sustainable procurement policy.
- 2. Supplier Diversity Programmes (SDPs), which have a long history in the United States, are being adopted by some public sector authorities in Canada, again most often at the municipal level. <u>SDPs, however, depend on the characteristics of business owners</u>. <u>This effectively limits the application of SDPs to small and medium-sized enterprises where the owner's characteristics can be clearly established</u>. <u>SDPs, therefore, have only limited relevance to the procurement of professional services</u>.
- A notable aspect of SDPs is that many rely on third-party certification of vendors to establish their eligibility. <u>Third-party certifications facilitate</u> <u>the objective and transparent application of a non-price criterion in</u> <u>selecting a vendor.</u> <u>For this reason, many public sector authorities</u> value these certifications in their procurement processes.
- 4. Although there is growing interest in Qualifications-Based Selection (QBS) of engineering service providers, QBS is not widely used in Canada. However, there is a much larger body of experience in the United States. As a result of the U.S. experience, the advantages of QBS to owners and clients are well established. Of particular importance to the focus of this study is that QBS readily accommodates the application of equity, diversity, and inclusion criteria as part of the broadly-defined "qualifications" of service providers. While there is not an automatic relationship between QBS and the application of equity, diversity, and inclusion criteria in selecting engineering service providers, the alignment of equity, diversity, and inclusion criteria with QBS is compelling and strategically important.
- 5. There are notable examples of engineering firms that are leaders in adopting equity, diversity, and inclusion principles. These firms seek to embed these principles into their business practices. Procurement policy could be used to foster the wider adoption of equity, diversity, and inclusion principles across the consulting engineering sector.

This review also suggests four areas where additional insight will be valuable. These include:

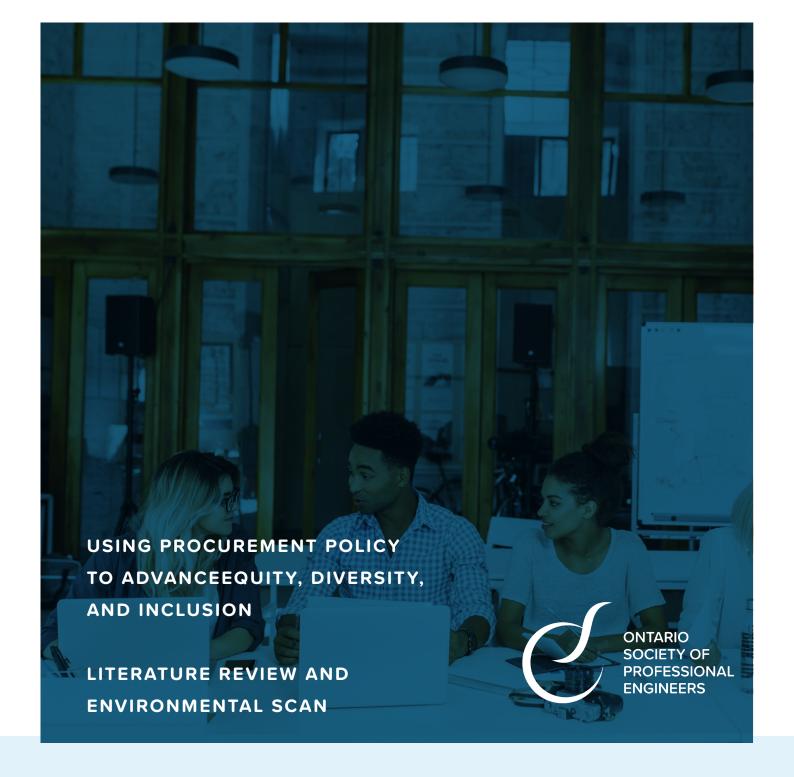
- 1. A better understanding of what leading engineering firms are already doing in the area of equity, diversity, and inclusion.
- Additional insight into the types of third-party certifications that public sector organizations value in their procurement processes.
- Insight from experienced procurement experts on how equity, diversity, and inclusion criteria can be incorporated into the different types of procurement processes that are used to hire professional services providers and engineering service providers, in particular.
- 4. Advice from QBS experts on how equity, diversity, and inclusion goals can be integrated into QBS.

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